

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/014618

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 G05B19/042 G05B19/418

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G05B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MUELLER W: "DAS HART-FELD-KOMMUNIKATIONS-PROTOKOLL" AUTOMATISIERUNGSTECHNISCHE PRAXIS - ATP, OLDENBOURG VERLAG. MUNCHEN, DE, vol. 34, no. 9, 1 September 1992 (1992-09-01); pages 518-520, 521, XP000311930 ISSN: 0178-2320 paragraphs '0002! - '0004!	1-19
X	"Gebrauchsanweisung IR - Type 334" February 2002 (2002-02), DRÄGER, GERMANY , XP002332894 page 8 - page 9 page 17 page 47 - page 48 ----- -/--	1-19



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

**\* Special categories of cited documents :**

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&amp;\* document member of the same patent family

Date of the actual completion of the international search

14 September 2005

Date of mailing of the international search report

10. 10. 2005

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ANONYMOUS: "HART, Field Communications Protocol, Application Guide" HART FIELD COMMUNICATIONS PROTOCOL APPLICATION GUIDE, 1999, pages 1-79, XP002219606	11-19
A	the whole document -----	1-10
A	Bedienungsanleitung IBIS für den HART Stellungsregler Typ 3780, Programm-Version 2.20, Ausgabe Juni 1999, SAMSON AG XP002344983 the whole document -----	1-19
A	DE 197 33 906 A1 (SIEMENS AG, 80333 MUENCHEN, DE; SIEMENS AG) 11 February 1999 (1999-02-11) the whole document -----	1,2,11
A	DE 44 41 752 A1 (SIEMENS AG, 80333 MUENCHEN, DE) 30 May 1996 (1996-05-30) the whole document -----	1,2,11

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2004/014618

### Box II Observations where certain claims were found unsearchable (Continuation of Item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of Item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☒ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

## 1. claims: 1,11-19

Claim 1: Method of automatically configuring a HART multidrop system comprising the following steps:

- connecting the slave devices
  - switching on the power source for the slave devices in the master device,
  - transmitting the HART command "Write Polling Address" as a broadcast command from the master device with a polling address not equal to zero and
  - changing the addresses for all slave devices from the identical address to a unique address for each slave device.
- Claims 11 - 19: HART multidrop system comprising at least one master device, a plurality of slave devices coupled to the at least one master device and a control unit.
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## 2. claims: 2-10

Method of expanding and automatically configuring the expanded HART multidrop system comprising a plurality of slave devices connected to at least one master device, and which is to be completed by at least one more slave device, wherein the method includes the step as follows:

- connecting the at least one more slave device,
  - switching off the power source for the slave devices in the master device if it is still switched on,
  - switching on the power source for all slave devices in the master device,
  - transmitting the HART command "Write Polling Address" as a broadcast command from the master device with a polling address not equal to zero and
  - changing the addresses for all slave devices from the identical address to a unique address for each slave device.
-

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/EP2004/014618

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 19733906	A1	11-02-1999	
		AT 231669 T	15-02-2003
		CN 1266574 A	13-09-2000
		WO 9908164 A2	18-02-1999
		EP 1020051 A2	19-07-2000
		ES 2191964 T3	16-09-2003
		HU 0002927 A2	29-01-2001
		ID 23667 A	11-05-2000
		JP 2001512944 T	28-08-2001
		PL 343866 A1	10-09-2001
		US 6700877 B1	02-03-2004
DE 4441752	A1	30-05-1996	
		WO 9616370 A1	30-05-1996